

## ABSTRACT OF THE DISCLOSURE

A lower electrode (11) formed of ruthenium has an opening generated by a void at time of formation, for example. A ruthenium oxide film (14) is provided on an upper surface of the lower electrode (11) to close an entry of the opening, and is formed by  
5 oxidizing the lower electrode (11). Similarly, a ruthenium oxide film (841) is provided to close an entry of an opening of a plug body (81) formed of ruthenium.